

SHEILA S. BLAIR

THE MADRASA AT ZUZAN: ISLAMIC ARCHITECTURE IN EASTERN IRAN ON THE EVE OF THE MONGOL INVASIONS

Not all medieval cities survive into modern times as major urban entities, and when they do not their monuments are often only slowly brought to light. This is particularly true of eastern Iran (fig. 1), where in some cases almost impenetrable mountain valleys have concealed extraordinary buildings for centuries. Two examples are the minaret at Jam and the madrasa at

Garjistan,¹ both discovered only recently. In other cases dramatic shifts in systems of irrigation and canalization reduced medieval metropolises to obscure villages. One example is Zuzan, located some sixty kilometers south of Khwaf near the present Iran-Afghan border, where an enormous building overwhelms an otherwise humble mud-brick hamlet (plate 1).

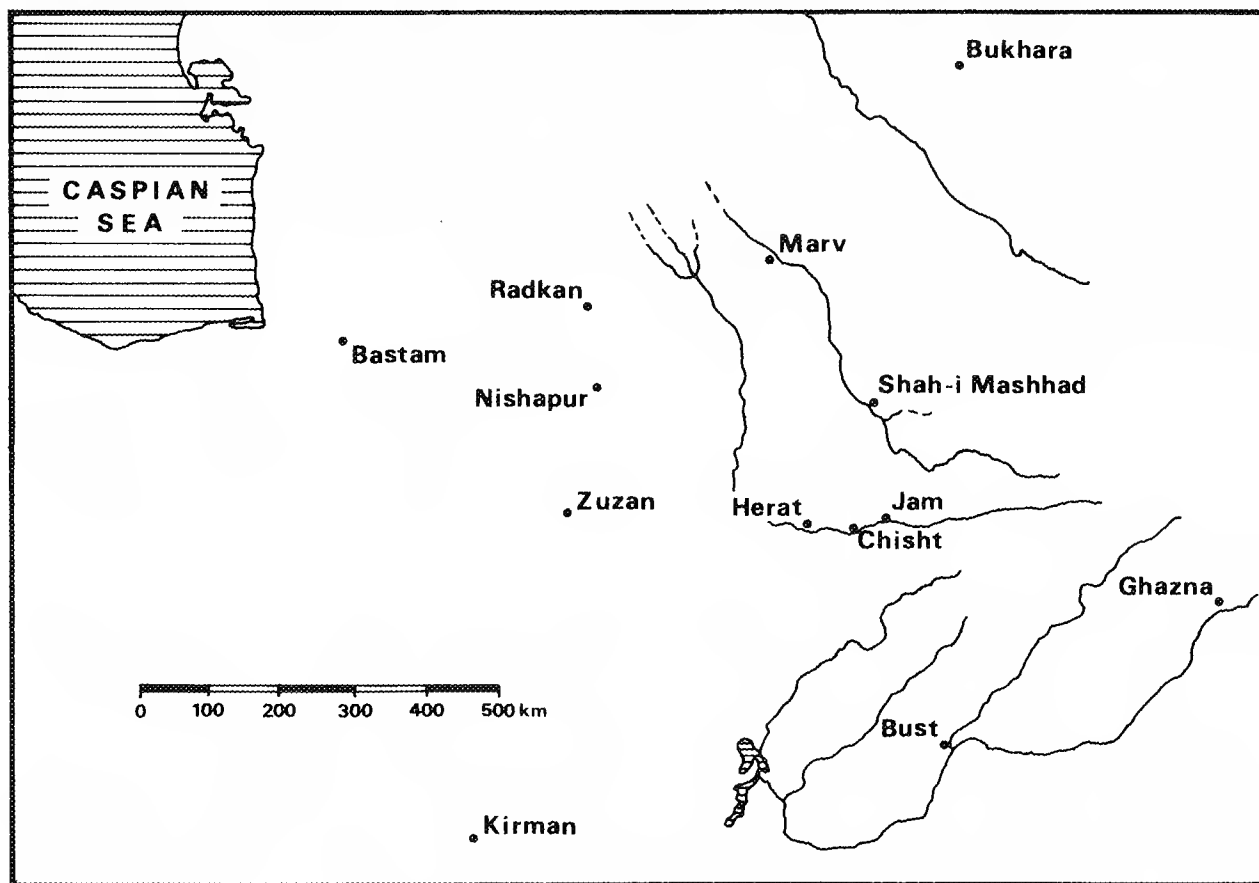


Figure 1. Sketch map of eastern Iran on the eve of the Mongol conquests

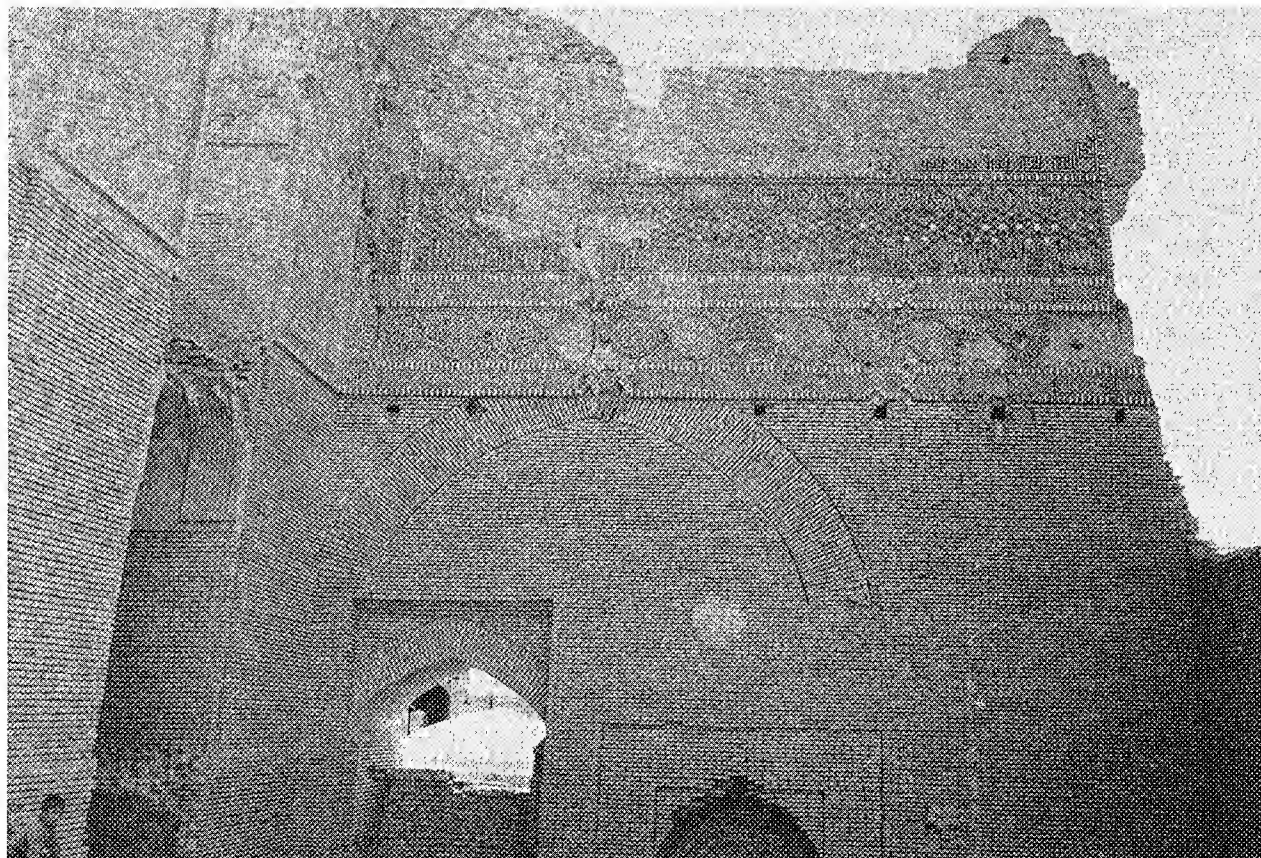


Plate 1. Zusan. Madrasa. South iwan. (Unless otherwise stated, all photographs are by the author.)

André Godard first described this large building, published a plan (plate 2) and photographs, and read some of the inscriptions.² The date 616 (1219) at the end of a band across the back of the qibla iwan (plate 3) enabled him to place the building in the reign of the malik of Zusan, Qiwam al-Din, Mu'ayyid al-Mulk Abu Bakr ibn 'Ali al-Zuzani, governor of the area during the reign (1200-20) of the Khwarazmshah 'Ala' al-Din Muhammad ibn Tekish. Godard also ascribed artistic importance to the monument's enormous size and to its decoration, which included the first exterior use of two-color faience.

Godard's publication has remained the basic study of the building. Donald Wilber included it in his compendium of Ilkhanid architecture, but simply summarized Godard's comments.³ J. Michael Rogers has challenged Godard's dating and his claim that it was a typical twelfth-century Khurasani mosque by arguing

that the date could be read *saba*^c (seven) instead of *sitta mi*²*a* (six hundred) and that the decoration appeared to him early-fourteenth rather than early-thirteenth century, but he suggested no new patron.⁴ Others, however, have gone along with Godard's dating,⁵ and it is indeed correct.⁶ The large Kufic band framing the north iwan confirms Godard's reading of the date. Although no longer extant, its final word [*s*]*itta mi*²*a* (six hundred) is still visible on his figure 106 (plate 4). The similar bold Kufic band on the south iwan, which Godard made out as "in the month of Rajab," on closer examination shows a bismillah (plate 5) and the opening words of sura 23, *qad aflaha al-mu'minin al-dh[inn]*... (plate 6), and ends with *fi shahr rabi*^c *al-awwal sana khamis 'ashr wa...*, "in the month of Rabi^c I of the year fifteen and ..." (plate 7). Rabi^c I corresponds to June 1218.

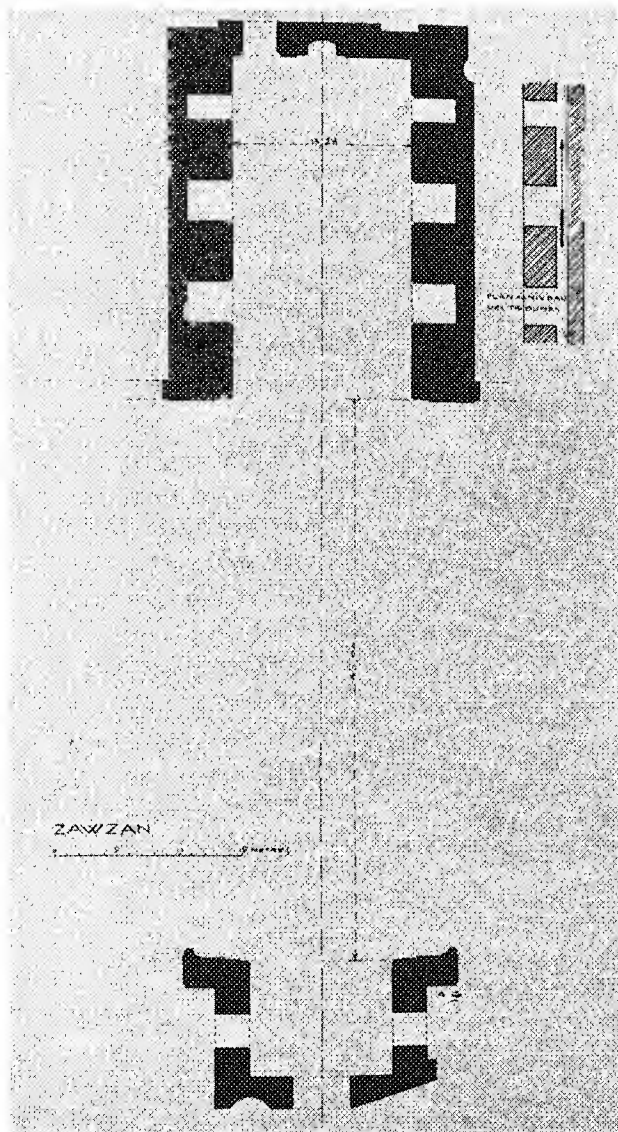


Plate 2. Zuzan. Madrasa. Plan. From Godard, *Athar-e Iran* 4, fig. 90.

These inscriptions, then, clearly confirm Godard's attribution of the building to the malik of Zuzan who ruled at a time of extreme political instability, with the Khwarazmshahs and Ghurids vying for control in Khurasan. Of humble birth, he had risen through the ranks until he was appointed governor of Zuzan by the Khwarazmshah 'Ala' al-Din Muhammad.⁷ He then turned to Kirman, and assisted by Khwarazmian troops, he launched his attack in Ramadan 609 (February 1213).⁸ Many of the surrounding cities sur-

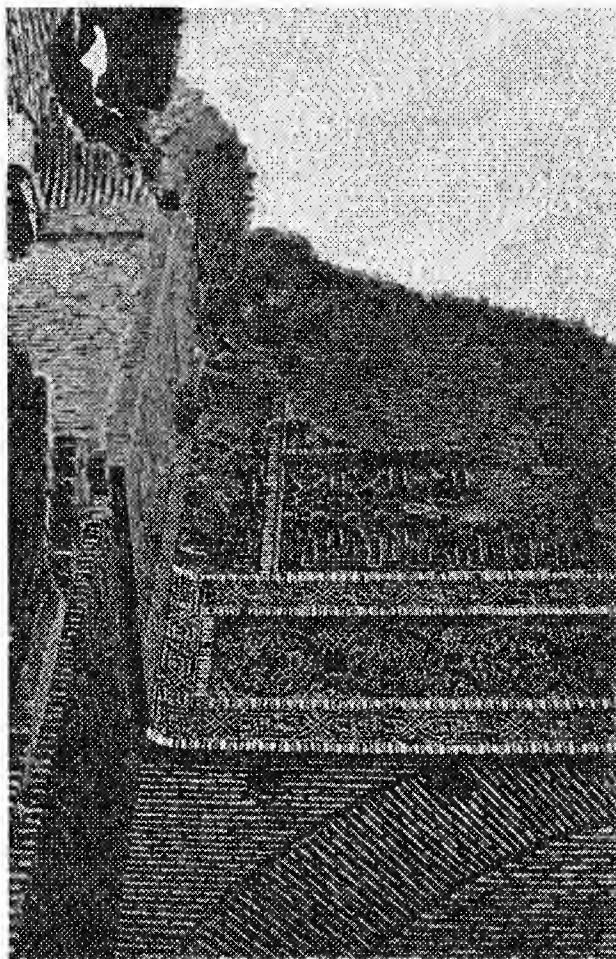


Plate 3. Zuzan. Madrasa. End of inscription framing north iwan. From Godard, *Athar-e Iran* 4, fig. 104.

rendered almost immediately, and the amir sent back so much booty to the Khwarazmshah that he was rewarded with the title, malik, and the *laqab* Mu'ayyid al-Mulk.⁹

In 1217-18 the Khwarazmshah set out on a campaign against the Abbasid caliph in Baghdad.¹⁰ When he reached Damghan, he engaged the Salghurid atabeg of Fars, Sa'd ibn Zangi, who had taken advantage of the unrest and was marching on the province of Persian Iraq, and took him prisoner. The Khwarazmshah wanted him put to death, but Sa'd took refuge with the malik of Zuzan who persuaded his overlord to spare the atabeg's life.¹¹

Various bits of information in texts suggest that the malik of Zuzan died the following year. Juzjani reports

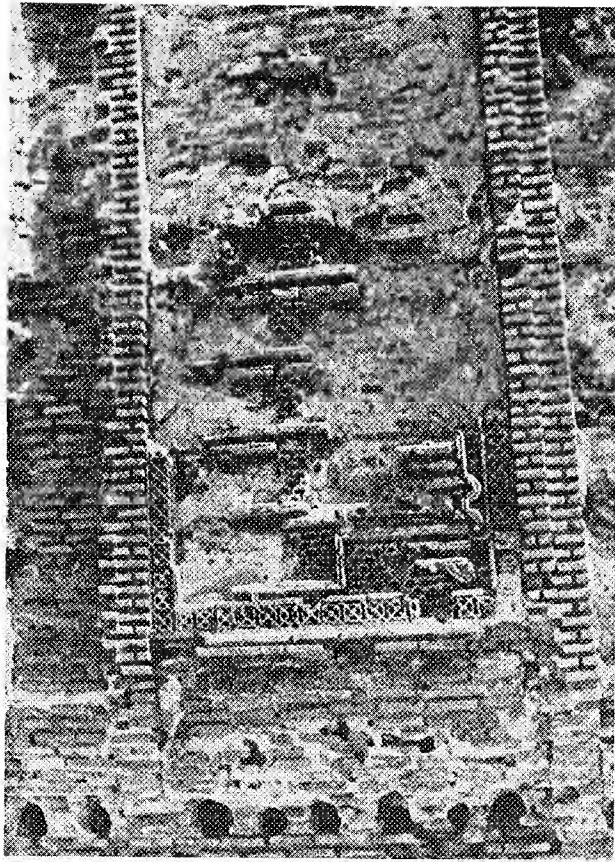


Plate 4. Zuzan. Madrasa. End of inscription framing north iwan.
From Godard, *Athar-e Iran* 4, fig. 106.

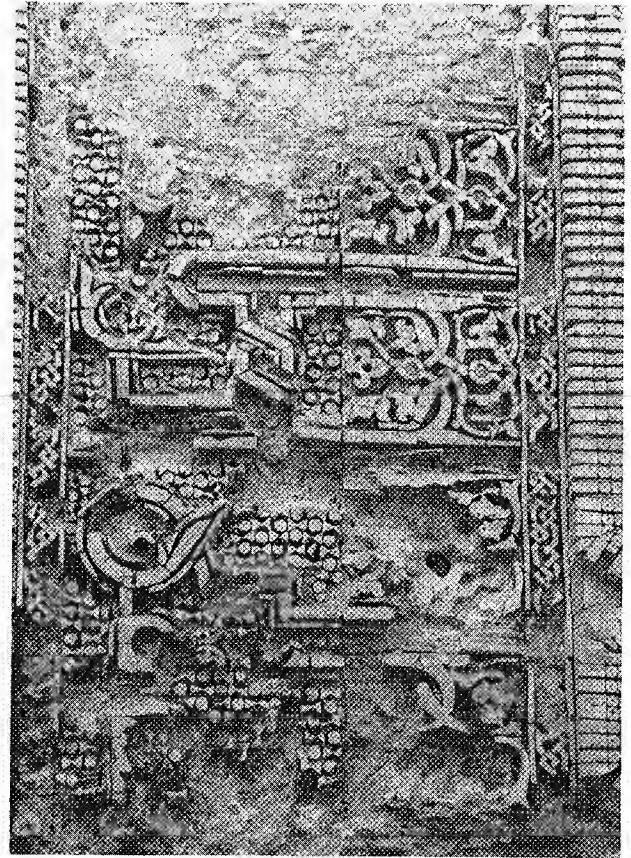


Plate 5. Zuzan. Madrasa. Beginning of the inscription framing the
south iwan, with the bismillah.

that the malik died some years after his appointment as governor of Kirman.¹² Nasawi tells us that the Khwarazmshah 'Ala' al-Din Muhammad learned of the malik's death upon his return to Nishapur after his campaign against Baghdad had foundered in unusually heavy snows.¹³ According to Juvayni, the ruler spent a month idling in Nishapur and then moved on to Bukhara where he remained from 8 Sha'ban to 10 Shawwal of the year 615 (1218).¹⁴ Therefore he must have learned of the malik's death in Rajab, the same month as the major dated inscription at Zuzan.¹⁵

While governor of Kirman, then, and just before his death the malik of Zuzan had ordered an enormous building constructed in his native city. Godard assumed that the building was a mosque, but its true function is revealed in the magnificent inscription that runs across the back of the south iwan (plates 8-10). Measuring approximately thirteen by five meters and executed in

light-blue glazed bricks set against a plain reddish-brick ground, the band is divided into three zones: in the lower zone are the bodies of the Kufic letters; in the middle zone the stems of the letters braided with hexagrams inserted in the interstices; in the upper zone alternating keyhole and segmented arches decorated with delicate cut stucco growing out of the interlacing below. The band reads: *bi-rasm aṣḥāb al-imām al-ā'zam sirāj al-umma Abī Hānifa Nu'man ibn al-Th[ābit al]-Kūfī raḍīya Allah 'anhu*. (For the followers of the great imam, light of nations, Abu Hanifa Nu'man ibn al-Th[ābit al]-Kufi, may God be pleased with him.)

Godard read some of this inscription but failed to recognize in it a typical dedication of a Hanafite madrasa. Abu Hanifa (d. 767), the great theologian and religious lawyer from whom the legal school (*madhhab*) of the Hanafites took its name, was often referred to by the epithet *sirāj al-umma* ("light of na-

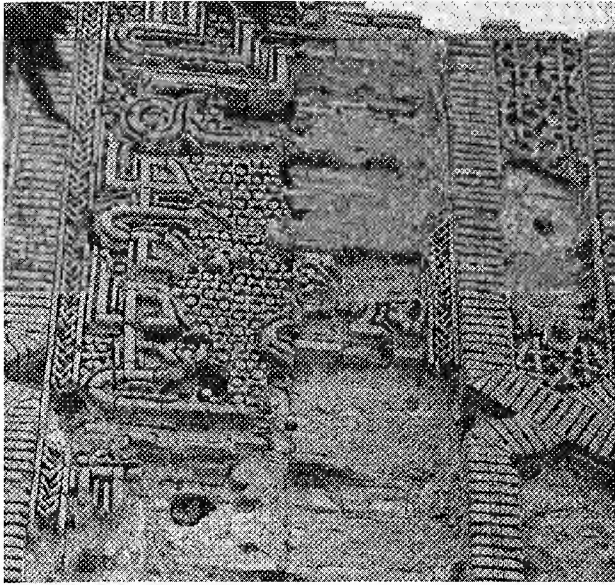


Plate 6. Zuzan. Madrasa. Inscription framing the south iwan: the beginning of sura 23.

tions").¹⁶ Endowment inscriptions from four twelfth-century Hanafite madrasas in Syria are dedicated to his disciples (*ʿalā aṣḥāb/madḥhab*) using that phrase.¹⁷ From Iraq the Hanafite school spread eastward. Well-known Hanafite jurists from Khurasan and Transoxiana developed a special law of irrigation adapted to the canals in Khurasan.¹⁸ Under the title of *ṣadr*, they controlled Bukhara from the eleventh to the fourteenth century through a Hanafite family whose head acted as hereditary chief (*raʾīs*).¹⁹ In 1451 a Hanafite sheikh, ʿAbd al-Karīm Abu ʿAbd al-ʿAzīz ibn ʿAbdallāh al-Khwafī, left an inscription in the Karimiyya madrasa in Aleppo (1256), which apparently converted it from a Shafʿite to a Hanafite school.²⁰

Contemporary texts as well substantiate the building at Zuzan as a Hanafite madrasa. Yaqut, writing about 1225, calls Zuzan a small Basra because of the large number of doctors, savants, and litterateurs there.²¹ Writing in 1259-60 Juzjani reports that the *khwāja* of Zuzan is "an excellent man and founded colleges (*madrasas*) of great repute and *ribāṭs* and erected the fortress of Sala-Mihr at Zuzan."²² A century later, Hamdullah Mustawfī reiterates that the malik of Zuzan had built a mighty palace there, and the people were of the Hanafite sect, law-abiding, and very attached to their faith.²³

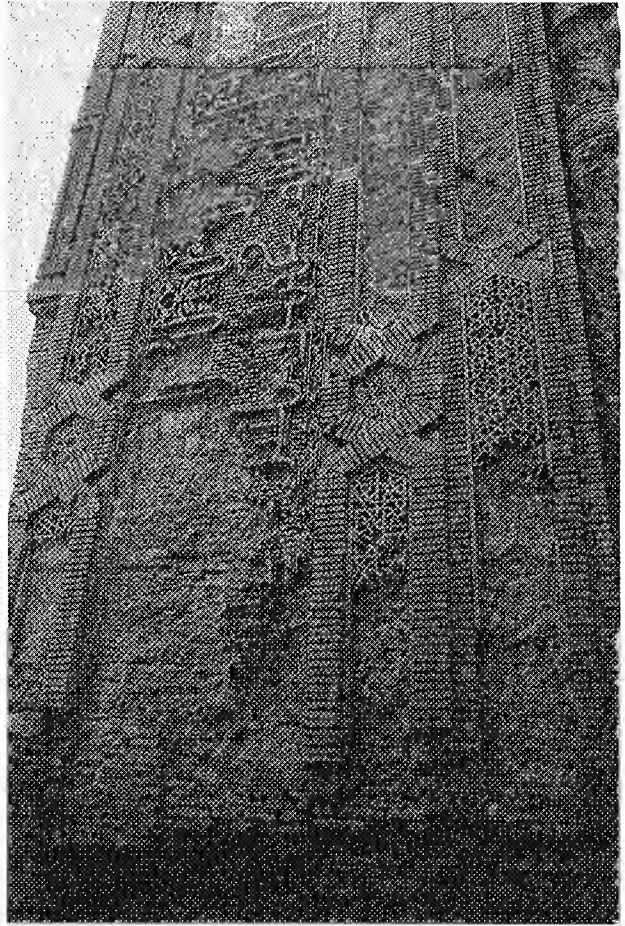


Plate 7. Zuzan. Madrasa. End of the inscription framing the south iwan with the date.

The identification of the building at Zuzan as a Hanafite madrasa explains some of its peculiarities. Although the orientation is not indicated on the plan, Godard tells us that it was at an 80° angle to a north-south axis.²⁴ This gives a qibla orientation of either 260° or 280° from north, which Godard explained by the presence of the palace next to it. Although the door through the qibla wall next to the mihrab (plate 2) suggests that it was meant to provide ready access for the ruler, as was the case in early dar al-ʿimara-congregational mosque combinations in Mesopotamia,²⁵ that does not necessarily mean that the palace next door determined the orientation of the qibla. Other considerations could have determined the orientation of both buildings.



Plate 8. Zuzan Madrasa. Beginning of the inscription across the back of the south iwan.

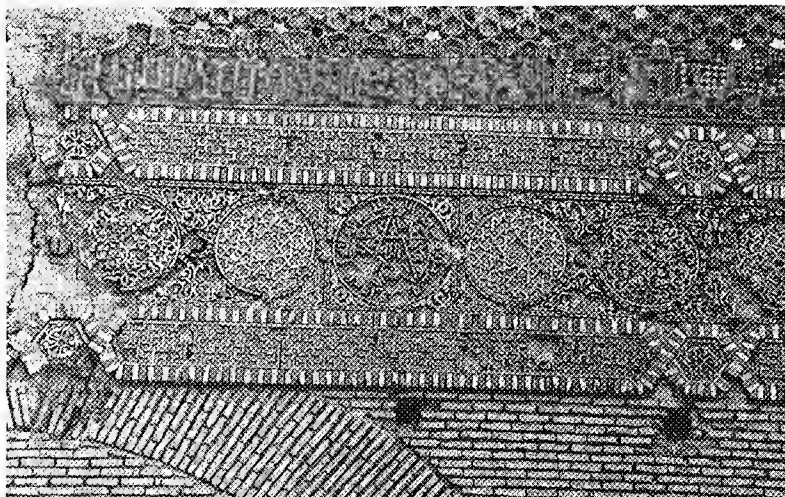


Plate 9. Zuzan Madrasa. Middle of the inscription across the back of the south iwan.

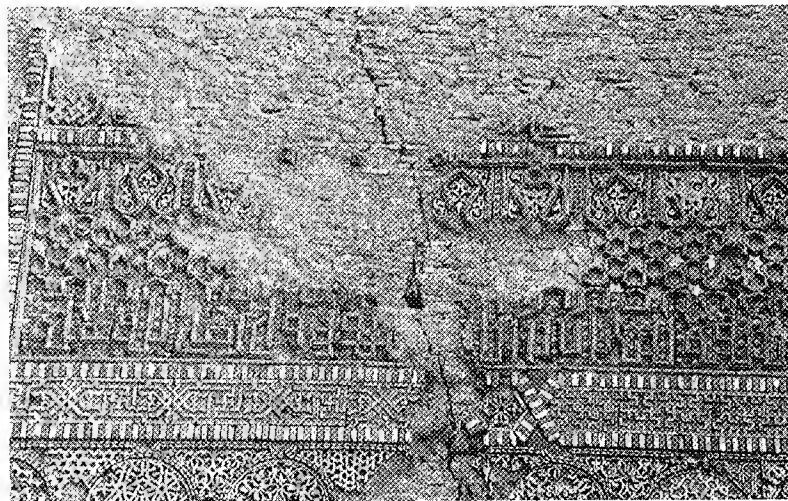


Plate 10. Zuzan Madrasa. End of the inscription across the back of the south iwan.

David King has found that the orientation of all medieval Islamic religious architecture was determined by a variety of factors, among them the azimuth of the rising sun at the winter solstice, the direction of the prevailing winds, the orientation of Canopus, and the determination of the Ashab (Companions of the Prophet).²⁶ Bazdawī, an eleventh-century qadī of Samarqand, states that Shafi'ites used a value of 180° due south, and Hanafites favored one of 270° due west, yet the congregational mosque was oriented toward the setting sun at midwinter (c. 240°), and medieval astronomers gave values of 230°.²⁷ That the madrasa at Zuzan fits most closely to the Hanafite value suggests that religious considerations and the requisite of the particular *madhhab* influenced the orientation of both madrasa and palace.

The Hanafite connection also explains the tribunes, which Godard suggests indicated the presence of palace inhabitants at religious ceremonies.²⁸ In fact, the activities housed there may well have been judicial and educational, and the surrounding rooms used for support functions such as residence for staff and students, libraries, and so forth.

Only three examples of pre-Mongol madrasas still exist in greater Iran, and even their identity is not certain. One is the Seljuq four-iwan building whose ruins were excavated at Ray,²⁹ but the lack of a mihrab and scanty documentation render its identity inconclusive. A second is the fragmentary ruin of a building in mud-brick at Khargird.³⁰ Its south iwan clearly bore the name and title of the Seljuq vizier Nizam al-Mulk, but whether it is a mosque or a madrasa and whether it had a two- or a four-iwan plan are in doubt. The only secure example is the recently discovered Ghurid madrasa at Shah-i Mashhad in Gargistan in northwestern Afghanistan.³¹ Here again, the plan is unclear: only two iwans remain, but excavations might still reveal two others. The inscription over the entrance portal identifies the building as a madrasa, its date as 571 (1176),³² and its patron as a female. The still extant beginning of the inscription tells us she was the great wise queen (*al-malika al-mu'azzama al-'ālima*), and its end accords blessings on her: ... *hā wa khallada Allah mulkahu wa dā'afa qudrahu bi-ta'rīkh ramadān sana ihdā wa saba'in wa khamsmi'a* (... her, extend her dominion and double her power; dated in the month of Ramadan of the year 571 [March-April 1176]). The high rank and lofty benedictions suggest that she was the wife of the reigning Ghurid ruler Ghiyath al-Din Muhammad ibn Sam. According to Juzjani, she was named Malika Taj

al-Harir Jawhar Malik and was the daughter of Ghiyath al-Din Muhammad's paternal uncle, the infamous Ghurid sultan 'Ala' al-Din Husayn Jahan-suz ("the world-burner").³³

Although the rite the Garjistan madrasa followed is not specified, it was probably Shafi'i. Juzjani reports that as youths both Ghiyath al-Din Muhammad and his brother Mu'izz al-Din had been adherents of the Karramiyya, but as a result of a vision Ghiyath al-Din Muhammad had transferred his allegiance to the Shafi'ite school of law.³⁴ He founded a madrasa for the famed Shafi'ite teacher Fakhr al-Din Razi in Herat and even invited him to Firuzkuh where popular support for the Karramiyya touched off such a riot that the speaker was forced to withdraw.³⁵ The madrasa at Zuzan, in contrast, was from the beginning Hanafite. But the religious differences between the two are in no way reflected in their architectural tradition and style.

That style can be traced through a series of dated royal Ghurid buildings in the second half of the twelfth century. The earliest of them is the south palace at Lashkar Gah whose entrance iwan bears the traces of an inscription with the date A.H. 55 x (1156-65) and the words *al-dawla al-malik al-mu'azzam*.³⁶ 'Ala' al-Din Husayn had sacked the castle and occupied the region in 1150-51, so this inscription must refer either to him (he died in 1161) or to his nephew and successor, the future Ghiyath al-Din Muhammad ibn Sam (1163-1203), who wintered in the region. The Ghurids continued to build in the area throughout the century. The arch at Bust contains a standard Ghurid dedicatory inscription of a framed rectangular band in knotted Kufic. The incomplete inscription with Koran 2:121 belongs to a religious structure, possibly a qubba. On the basis of its epigraphy, style, and lack of glazed decoration, Sourdél-Thomine attributed it to the third quarter of the twelfth century.³⁷

The second dated monument is a small domed structure at Chisht (plate 11, left). A cursive inscription with triple punched stems running around the drum of the dome gives the name of the patron. Visible in a published illustration of the east side³⁸ are the words *fi ayyām al-dawla al-malik al-mu'azzam al-mu'ayyad al-muza'far al-manşūr al-'ālim al-'ādil Shams al-Dunyā wa'l-Dīn* (during the days of the reign of the great malik, assisted [by God], victorious, triumphant, wise, just, Shams al-Dunya wa'l-Din) referring to the Ghurid ruler Muhammad ibn Sam before he assumed the title of sultan and the regnal laqab Ghiyath al-Dunya wa'l-Din. A band in Kufic with single punched stems

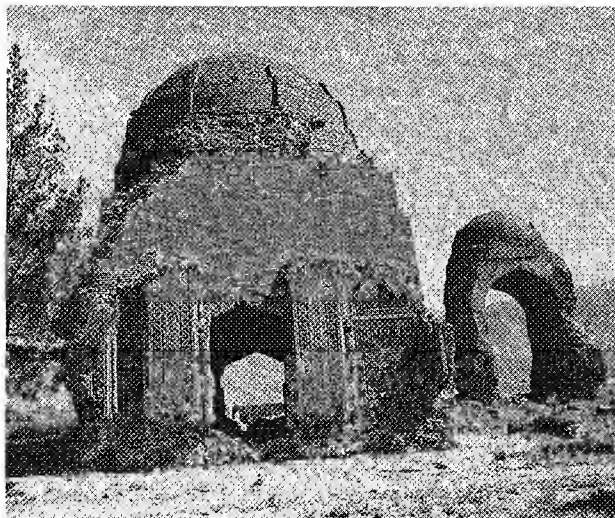


Plate 11. Chisht. Mausolea.

encircles the blind arches on the four interior walls and is inscribed, beginning in the northeast corner, with the bismillah, Koran 3:18-19, 2:255 and, ending on the east wall, with another bismillah and the date in Persian.³⁹ *bi-tārikh-i dahum jamīd al-awwāl sāl-i qabr* [?] *pānšad shast dū az hijrat-i payghāmbār Muḥammad ṣallī Allāh ʿalayhi* (dated the tenth of Jumid [sic] I of the year [one word] 562 [March 4, 1167] since the hegira of the Prophet Muhammad, God's blessings upon him [plate 12]).

In 1163 the malik Shams al-Din Muhammad ibn Sam assumed the title of sultan and the regnal name Ghiyath al-Din. He annexed Herat three years later, the same year that the Gargistan madrasa was built, presumably under the patronage of his wife. Around the same time, one of the Khwarazmian princes, Sultan Shah, also solicited Ghiyath al-Din Muhammad's aid against his brother, the reigning Khwarazmshah, ʿAla' al-Din Tekish. An inscription in the shrine at Mashhad records this alliance and the date 577 (1181).⁴⁰ The agreement was rather short-lived: in 1190 Ghiyath al-Din Muhammad defeated his erstwhile ally Sultan Shah near Merv and took over most of his territory in Khurasan.

A second, taller domed structure at Chisht dates from this period as well (plate 11, right). All that remains of the dedicatory inscription on its portal are the words *al-sultān al-muʿazzam ... bi-tāʾrikh rabiʿ al-akhir sana* (the great sultan ... dated in Rabiʿ II of the year) (plate 13).



Plate 12. Chisht. Mausoleum dated 1167. Detail of interior inscription with the date.

Stylistic characteristics link it to the 1176 Garjistan madrasa, but the use of the title "great sultan" connects it to the 1181 inscription and prefigures the most extraordinary Ghurid monument, the minaret of Jam. Wiet published the dedicatory inscription of this minaret, which includes the full name and titles of the Ghurid ruler Ghiyath al-Din Muhammad.⁴¹ Another inscription names the artisan ʿAlī ibn Amir Muhammad al-L. ...⁴² According to Pinder-Wilson, the octagonal plinth above the north entrance gives the date 590 (1194).⁴³

In the last decade of Ghiyath al-Din's life, the Ghurids undertook a major building program of mosques and related structures. Since Ghiyath al-Din Muhammad had sent his brother Muʿizz al-Din



Plate 13. Chisht. Later mausoleum. Detail of framing inscription.

Muhammad and his lieutenant Qutb al-Din Aybak (the founder of the Delhi sultanate) off to conquer India, many of these buildings were commissioned at Delhi and Ajmer, as well as other sites.⁴⁴ Most of them are ascribed to Mu'izz al-Din Muhammad or Qutb al-Din Aybak, but a notable exception is the Qutb Minar in Delhi, whose two inscription bands bear the names of the Ghurid co-regents and brothers.⁴⁵ No date is given for the construction, but it must predate Ghiyath al-Din Muhammad's death in 1202, and may well be coincident with the 1196 date inscribed on the nearby mosque.⁴⁶

At about the same time Ghiyath al-Din Muhammad restored the congregational mosque in Herat. Melikian-Chirvani has published Ghurid inscriptions from three parts of the building: vaults flanking the

west iwan, a recently uncovered portal dated 597 (1200) on the east side, and a now-destroyed tomb chamber on the north.⁴⁷ Texts tell us that the work was quickly completed by his son when Ghiyath al-Din Muhammad died, so that by the early thirteenth century the mosque would have reached its current limits.⁴⁸

Altogether, then, a remarkable range of civil, religious, and commemorative architecture sponsored by Ghurid rulers in eastern Iran in the second half of the twelfth century has survived.⁴⁹ Standard building types (iwan-plan mosques and madrasas, cylindrical minarets) were lavishly inscribed with large epigraphic bands giving the names and titles of the sovereign, sometimes emblazoned in blue tile, and framing portals or archways (Bust, Garjistan, Chisht, Herat) or encircling minarets (Jam, Delhi). Appropriately declamatory Koranic verses were selected. The beginning of the Victory Sura (48) rings the oratory that was added to the audience hall at Lashkar Gah and the blind niches on the façade of the Garjistan madrasa.⁵⁰ The arch at Bust carries Koran 2:127, metaphorically connecting the construction with Abraham and Isma'il's raising of the first temple at Mecca.⁵¹ Most spectacularly, the interlacing band around the bottom shaft of the minaret at Jam, with the entire Sura of Miryam (19), undoubtedly had some sort of significance for the local population.⁵²

These royally sponsored monuments show not only that the Ghurids were lavish patrons of architecture, but also that their architectural endowments were part of a coordinated campaign to champion Islam. In part, this was done through the patronage and endowment of mosques and madrasas, both to convert the heathen and to counter internal heresies. Ghiyath al-Din Muhammad's titles, such as *mu'izz al-Islām wa'l-Muslimīn* (he who exalts Islam and the Muslims) or *qasīm amīr al-mu'minīn* (associate of the Commander of the Believers), underscore his role as defender of Islam.⁵³ His tomb in the mosque at Herat not only has dedicatory bands around the dado and base of the dome, but even a panel on the lower wall, in a strange knotted Kufic, which instead of simply repeating pious phrases, extols the sultan as defender of God's countries and vanquisher of God's enemies (*hāfiẓ bilād Allāh, qāhir a'dā' Allāh*).⁵⁴ Ghurid titles are as polemical as those of the contemporary Zangids in the west.⁵⁵

Another way the Ghurids championed Islam was to encourage the cult of saints and mystics. Ghiyath al-Din Muhammad sponsored at least two buildings at Chisht, where the founder of the Chistiyya order of

Sufis, Khwaja Abu Ishaq of Syria, had settled. In the late twelfth century, one of the outstanding figures of the order, Khwaja Mu'in al-Din Hasan Sijzi Chishti, took the order to India, going to Delhi in 1193 and then to Ajmer where he established a major Chishti center.⁵⁶ He followed right on the heels of the Ghurid sultan Mu'izz al-Din Muhammad, who had just conquered these cities and was busily ordering major mosques to be built in them. At the same time, Ghiyath al-Din Muhammad had conquered territories as far west as Bastam where the last Ghurid ruler, 'Ala' al-Din Muhammad (d. 1215), ordered his own burial next to the tomb of the famous mystic Shaykh Bayazid Bastami.⁵⁷

Among the popular saints, Mahmud of Ghazna was a particular favorite. The Ghurids fixed up his tomb by adding doors and a prismatic socle to the cenotaph.⁵⁸ The choice of Mahmud of Ghazna is not surprising. In both form and intent, Ghurid architecture continues that of the Ghaznavids, who had been strong supporters of the Abbasid caliphs and the sunna and patrons of similar proclamatory works like the minarets of Ghazna and the opulent palace cities of Lashkar Gah and Ghazna.⁵⁹ Ghaznavid inscriptions had been similarly pointed, from the panegyric poetry emulating the court of the palace at Ghazna to the aptly chosen Koranic verses (27:40-41), referring to the Queen of Sheba's visit before the throne of Solomon, inscribed around the audience hall in the palace at Lashkar Gah.⁶⁰

The same themes and forms are found in the post-Ghurid madrasa at Zuzan. Its very scale attests to the zeal and wealth of its patron, and its monumental Koranic inscription (beginning of sura 23) framing the south iwan champions the triumph of believers. The Seljuqs had already used these verses polemically by inscribing them across the south façade of the domed sanctuary inserted into the mosque at Isfahan, the first known Seljuq construction in the congregational mosque in the capital after the defeat of the Shi'ite Kakuyids.⁶¹

Where Ghurid architecture departs from its predecessors is in style. Sourdél-Thomine was the first to describe a "Ghurid" style in which the brick patterning of earlier monuments had given way to a revetment in the form of a geometric grid, and where, despite the elegant floral motifs and vegetal forms decorating epigraphic bands of Kufic with an ornamental border of Kufic on an undulating scroll, decoration had a certain

aridity that opulence and virtuosity could not completely conceal.⁶² In late Ghaznavid buildings, bricks were bonded into the structure. Ghurid buildings were covered by "brick mosaic" or strapwork patterns which lay on the surface. Stucco decoration (which seems not to have come into its own until the twelfth century) underwent similar changes: Ghaznavid stucco is stamped in regular, crisp patterns very different from the Ghurid variety in which foliations unroll along an undulating scroll.⁶³

In style, the madrasa at Zuzan continues Ghurid architectural decoration, specifically the metropolitan style centered in the royal monuments of Herat. Interlacing bands divide the applied surface ornament on the façade of the south iwan at Zuzan into geometric compartments filled with strapwork (plate 14). Similar brick mosaic, so typical of Ghurid architecture, is found



Plate 14. Zuzan. Madrasa. Strapwork decoration on south iwan.

on the arch at Bust, the Garjistan madrasa, the later building at Chisht (plate 15), the minaret at Jam (though there the interlacing band is not geometric but epigraphic), and the east portal to the congregational mosque at Herat.⁶⁴

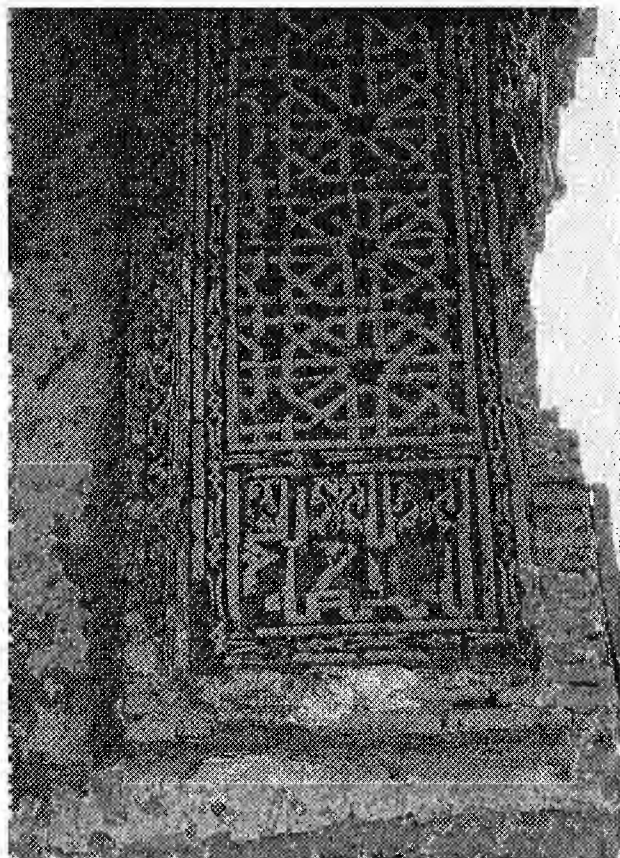


Plate 15. Chisht. Later mausoleum. Strapwork decoration.

The typical Ghurid foundation inscription is a tripartite band: a lower register of Kufic letters, sometimes with trefoil ornament; a middle register of geometric interlacing growing out of the stems; and an upper register of interlacing split palmettes or arabesques connecting half of each pair of verticals. This type of script derives from Seljuq and Ghaznavid bordered Kufic scripts (e.g., those used at Khargird or on the minarets at Ghazna or Firuzabad),⁶⁵ but the insertion of delicate split palmettes in the third tier is typical only of later twelfth- or early thirteenth-century monuments around Herat. Royal Ghurid examples of such foundation in-

scriptions framing portals include the Garjistan madrasa, the second building at Chisht (plates 13 and 15), and the east portal to the congregational mosque at Herat.⁶⁶ The same style is also used on the minaret at Qasimabad in the upper band bearing the titles of Taj al-Din Harb, local malik of Seistan and Nimruz.⁶⁷ Juzjani mentions that he was a vassal of the Ghurids, reciting the khutba and inscribing the coinage in their name,⁶⁸ and hence it would have made sense for him to use a script typical of his overlords.

The inscriptions at Bust and Jam, however, differ in some respects from the other Ghurid foundation inscriptions. The Bust inscription is a similar frame band in a tripartite strip of letters, interlacing, and floral ornament, but it lacks the rhythmic progression of paired verticals and split palmettes.⁶⁹ The Jam minaret's lower inscription is also similar, but in place of the interlaced split palmettes are silhouetted leaves with an arbitrarily applied surface pattern inside the tendrils.⁷⁰ The upper foundation inscription in glazed tile lacks the intermediate interlacing, and the floral decoration has become more stylized and lacks stipling.⁷¹

The Khwarazmshahs, heirs to the Ghurid dominions in Khurasan in the early thirteenth century, adapted the style of their predecessors. The inscription framing a portal at Dahistan in southern Turkmenistan records the titles of the Khwarazmshah 'Ala' al-Din Muhammad in the usual tripartite inscription, done in light-blue glazed tile with terra-cotta half-palmettes inserted in the upper tier, but the knotting has lost the spontaneity of the best Ghurid examples (e.g., the mosque portal at Herat) and the middle tier has become a monotonous succession of identical knots.⁷²

The 1218 madrasa at Zuzan, whose patron was an amir in the service of the Khwarazmshah, uses a similar tripartite layout for the inscription framing the south iwan (plates 5-7). This time, however, the band is unglazed and the letters have incised borders. Unfortunately almost nothing remains of the dated cursive inscription that once ran around its back (plates 8-10), but it still shows the same tripartite division and fascination with interlacing and ornamentation of the upper zone. The closest comparison to be found is a band on the outer right-hand side of the arched portal at Garjistan, where the stems form an intermediate zone of interlaced hexagons and terminate in pairs.⁷³ Could Zuzan's south iwan have had triple punched stems on an undulating scroll background such as those used on Ghurid buildings? The 1167 structure at Chisht (plate 12), the Garjistan madrasa, and the tomb of Ghiyath al-

Din Muhammad in the mosque at Herat come most immediately to mind.⁷⁴ Stamped stems on a scroll ground are also used in an inscription with the name of a later malik of Seistan Yamin al-Din Bahramshah (1215-21) in the ruins at Peshwaran⁷⁵ and remain typical of Khurasani epigraphy during the succeeding centuries.⁷⁶

Thus the decorative epigraphy on the madrasa at Zuzan compares most closely to Ghurid monuments at Garjistan, Chisht, and Herat, and differs from those at Jam and Bust. On geographical grounds alone one can surmise that Herat was the center for this style (fig. 1), but the texts also provide a more tangible link between the malik of Zuzan and that city. Juwayni reports that in 603 (1206-07) the governor of Herat, Ibn Kharmil, secretly concluded an alliance with the Ghurid sultan Ghiyath al-Din Mahmud. Enraged, the Khwarazmshah 'Ala' al-Din Muhammad surreptitiously ordered his amirs to seize the deceitful governor. The amirs summoned Ibn Kharmil to a consultation, after which the malik of Zuzan invited him home—ostensibly for a feast, actually to kill him. Aware of the malik's intentions, Ibn Kharmil refused to come, so the malik then ordered the other amirs to carry him off to a fortress where they killed him and sent his head back to Khwarazm.⁷⁷ The episode shows that the malik of Zuzan was a most trusted follower of the Khwarazmshah, but it incidentally also tells us that he had a house in Herat. Living there, he must have had more than a passing acquaintance with the art and architecture in the city, particularly the major reconstruction of the congregational mosque that had been completed some five years earlier.

Herat in the late twelfth and early thirteenth century was a flourishing metropolis famed for its artisans. In 1163 a merchant there commissioned what became one of the most famous metal objects in Islamic art, now known as the Bobrinsky kettle, and a whole series of similar inlaid buckets and ewers originated there.⁷⁸ Herzfeld published a remarkable inlaid pen box now in the Freer Gallery of Art, made for the last Khwarazmian vizier, dated 607 (1210) and signed by its maker, al-Shazi.⁷⁹ Melikian-Chirvani also found other pieces signed by the same master with the *nisba* al-Haravi (of Herat) and has assigned a large number of bronze objects to that city during this period.⁸⁰ All these pieces are characterized by decorative epigraphy, particularly a type of bordered script in which the upper ends of the stems terminate, not in fleurons, but in faces.⁸¹

Herati builders were also notable in this period. The Ghurid ruler Mu'izz al-Din Muhammad must have taken Herati builders with him to India, for the mosque at Ajmer has an inscription stating that that work was done in 596 (1200) under the supervision (*fi tawliyya*) of Abu Bakr ibn Ahmad Khalu (?) of Herat.⁸²

All the sources speak of the great wealth of the malik of Zuzan.⁸³ In the 1210's when he decided to endow an enormous madrasa in his native city, he would have hired the best architects and craftsmen available to build it, men who had been trained on royal Ghurid buildings in and around Herat. These artisans were available for outside commissions, for following the death of Ghiyath al-Din Muhammad in 1203 and that of his brother in 1206, the Ghurids were wracked by internal quarrels, and their territory fell to Khwarazmian domination. Herat was finally taken in 1208-09, just before the malik undertook his work.

The scale of the investment and the quality of the craftsmen explains one final aspect of the decoration at Zuzan: the sophisticated glazed tile which is done in an intricate technique and in a broad palette of three colors. All three parts of the epigraphic band across the south iwan (letters, interlacing, and arcading) are done in light-blue glazed brick (plates 8-10). Inserted into the interlacing are white pentagrams and dark-blue hexagons. Guard bands are composed of rectangles of alternating white and light-blue glazed bricks. Below, a row of thirteen roundels encloses decorative patterns in plain and light-blue glazed brick. The central roundel in light-blue glazed brick has an interlaced pentagram, the name Muhammad repeated five times in a circle around the central word, Allah.

In his seminal article outlining the development of mosaic faience in Iran, Donald Wilber showed that the use of glazed revetment followed a logical, if slow, development from the mid-eleventh through the twelfth century.⁸⁴ However, the lack of any dated examples from 1200 to 1270—indeed the dearth of any monuments in Iran from that period—forced him to posit a hiatus of some seventy years which he attributed to the Mongol invasions. Production, he argued, was resumed on a rather small scale a generation after the invasions, but by the beginning of the fourteenth century imperial Mongol monuments in Azarbayjan had reached the threshold of complete mosaic faience using a three- or four-color palette.

More recent discoveries allow a revision of this chronology, particularly with respect to eastern Iran. In

central Asia light-blue glaze was used for an inscription in relief as early as the 1127 Kalyan minaret in Bukhara, and glazed terra cotta appears on several other Bukharan monuments attributed to the twelfth century (e.g., the mosque of Maghok 'Attari and the Namazgah).⁸⁵ Light-blue glazed inscription bands were popular at this time: those on the Ghurid monuments at Jain and Herat and on the two portals at Dahistan and Abiverd in southern Turkmenistan have already been mentioned.⁸⁶ The Herat portal also has light-blue glazed plugs inserted into a complex strapwork pattern.

Two-color glazed decoration also appears on two early-thirteenth-century Khurasani tomb towers at Radkan and Kishmar. The light-blue glazed inscription band below the conical roof on the Radkan tower is partially destroyed: one short word ending in two teeth is missing in the date between *fī sana* (in the year) and *sitta mi'a* (six hundred) (plate 16). Van Berchem originally

very little space, and *ithnayn* is the shortest choice. Although not entirely legible, the rest of the inscription (plate 17) is written in Persian, a practice that is more

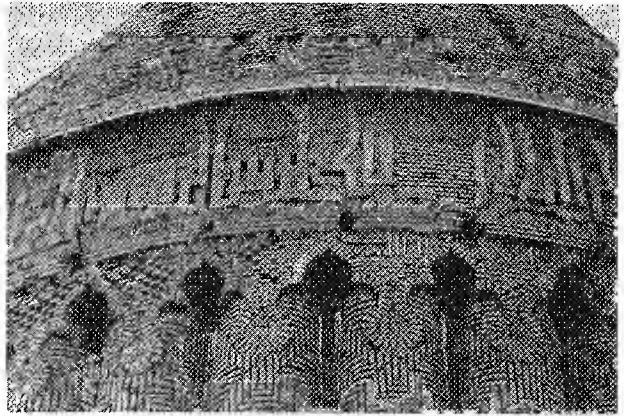


Plate 17. Radkan. Tomb tower, 1205-6. Detail of inscription with artisan's signature.

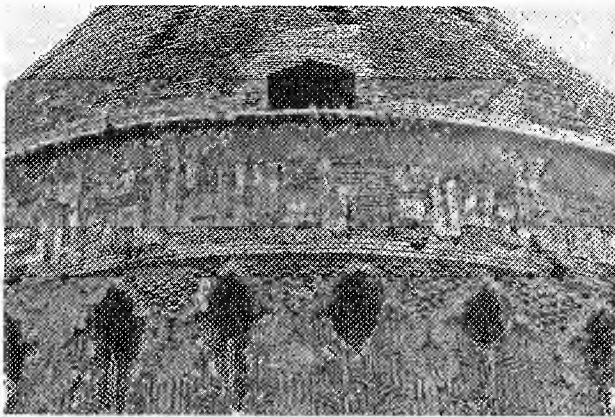


Plate 16. Radkan. Tomb tower, 1205-6. Detail of inscription with date.

suggested that *ithnayn*, the word for "two" filled the gap,⁸⁷ but Herzfeld pointed out that the words for five, twenty, thirty, sixty, or eighty were also possible, and he himself favored a date of 680 (1281-82) which accorded with the local tradition identifying the building as the tomb of the amir Arghun, the local governor under the Ilkhanids Hulagu and Abaqa who died in Radkan in 1275.⁸⁸ Wilber followed Herzfeld's attribution and used the tower, and the similar undated one at Kishmar, to illustrate the resumption of faience following the Mongol invasions.⁸⁹

In fact, van Berchem's earlier dating of 1205-06 is to be preferred. The missing word in the date occupies

common in the pre-Mongol period, and shows that the tomb was not built for the Mongol governor Arghun, but rather for 'Abdallah, an otherwise-unknown amir of Radkan, by his heirs.⁹⁰ Similar in style and decoration, the tower at Kishmar should also be attributed to the early thirteenth century.

A second color glaze required no new technology, but only adding small amounts of cobalt oxide. Cobalt was mined in central Iran near Kashan and was already used in alkaline-glazed ceramics, particularly the type known as laqabi-ware.⁹¹ While Kashan had a cobalt monopoly for centuries, the small amounts needed for glazes (2 or 3 percent) must have been available in eastern Iran through trade.⁹² Under the Yuan dynasty (1260-1368), cobalt was exported to China, where it was known as "Muhammadan blue."⁹³

In the late twelfth and early thirteenth centuries, eastern Iran imported other ceramic techniques from central Iran. Italian excavators at Ghazna uncovered an unusual series of small glazed tiles in the post-Ghaznavid layers of the palace of Mas'ud III.⁹⁴ Although crude in execution and limited in decorative repertory, the tiles show a broad range of colors (green, yellow, brown, red, blue, and turquoise). A large part of the material found during the excavations—including bronzes, ceramics, and marble pieces—has been attributed to the late twelfth and early thirteenth centuries, and glazed wares in particular

share motifs and stylistic peculiarities with Iran proper. The excavators suggested that under the Ghurid ruler Mu'izz al-Din Muhammad, economic conditions were favorable for an artistic revival, including an expansion of ceramic workshops, and concluded that the central Iranian influence occurred either through the spontaneous or forced migration of artisans or from the normal current of trade.

The madrasa at Zuzan, therefore, is both a continuation of a tradition of glazed ceramics in eastern Iran into the late twelfth and early thirteenth centuries and a step forward, not only in its use of a third color but also in its greater realization of the potential of glazed tile in playing off various colors and glazed with unglazed surfaces. The patron's substantial investment in using the best craftsmen available from Herat paid off in increased sophistication. The effects of both investment and craftsmanship can be measured by comparing this monument with the minaret at Nigar (a village fifty-six kilometers south-southwest of Kirman and twenty kilometers east of Bardsir), another building constructed under the auspices of the malik of Zuzan.

Sykes, the first person to publish the mosque and minaret, was told that the mihrab once had an inscription dated 615 (1218).⁹⁵ Almost nothing remains of the mihrab, but the mosque still has the truncated shaft of a baked-brick minaret with a Koranic inscription (sura 97) in light-blue glazed brick surrounded by guard bands of alternating light- and dark-blue glazed diamonds. If we accept the 1218 date—and it fits stylistically—then the minaret and mosque fit precisely under the patronage of the malik of Zuzan who had taken over Bardsir in June of 1213.

The decoration of the Nigar minaret shows some affinities to that used on other monuments in eastern Iran, particularly in its light-blue glazed tripartite inscription of letters, interlacing, and floral ornament and its two-color guard bands.⁹⁶ But its glazed decoration is much more restricted in color and technique than that found at Zuzan, and it must represent a lower level of investment.

The madrasa at Zuzan exemplifies the cultural florescence of eastern Iran in the late twelfth and early thirteenth centuries. It partakes of a Ghurid style of architectural decoration in brick mosaic, particularly the style that was centered in Herat in the last quarter of the twelfth century with its bordered Kufic and split-palmette inserts in the upper zone. Its sophisticated use of glazed tile attests to the burgeoning ceramic industry in the area. Despite political unrest and dynastic in-

fighting, on the eve of the Mongol invasions the rulers of eastern Iran, both sultans and local princes, had enormous resources at their command to invest in major building programs and luxury objects with sophisticated decoration.

Cambridge, Massachusetts

NOTES

1. André Maricq and Gaston Wiet, *Le Minaret de Djam* (Mémoires de la Délégation Archéologique Française en Afghanistan 16) (Paris, 1959), and Michael J. Casimir and Bernt Glatzer, "Šāh-i Mašhad, a Recently Discovered Madrasah of the Ghurid Period in Garḡistān (Afghanistan)," *East and West* n.s. 21 (1971): 53-68. I am using the term "Iran" in its greater historical sense; many of the buildings are in modern Afghanistan.
2. André Godard, "Khorāsān," *Athār-e Iran* 4 (1949): 113-25. Whereas some medieval texts give a spelling that renders the pronunciation "Zawsan," I have adopted the modern "Zuzan" (Ludwig Adamec, *Historical Gazetteer of Iran 2: Meshed and Northeastern Iran* (Graz, 1981), p. 689).
3. Donald Wilber, *The Architecture of Islamic Iran: The Il-Khānīd Period* (Princeton, 1955), no. 2, p. 104.
4. J. Michael Rogers, "Seljuk Architectural Decoration at Sivās," *The Art of Iran and Anatolia from the 11th to the 13th Century A.D.*, Percival David Foundation of Chinese Art Colloquium on Art and Archaeology in Asia, 4 (25-28 June 1973), ed. William Watson (London, n.d.), p. 25 and n. 13.
5. Leonard Harrow and Antony Hutt, for example, captioned their photographs with the date 1219 and the identification, mosque of the malik of Zuzan (*Iran* 1 [London, 1977] pp. 136-38, pls. 80-82); the List of Historic Sites and Ancient Monuments of Iran also uses this word and mentions inscriptions dated A.H. 600 and 610 (Naṣratallāh Miškātī, *Fihrist-i Bināhā-yi Tārikhī wa Amākan-i Bāstānī-yi Īrān* (Tehran, 1349/1971), p. 85).
6. The vertical cursive inscription on the back of the south iwan has deteriorated since Godard's visit (compare plates 1 and 3). The last words 'ashr wa sittā mi'a (61 ×) are clear, but the unit's digit has been partly destroyed. Godard's reading of sittā (six) is possible, but I am unable to confirm it, and on historical grounds it is questionable.
7. Ibn al-Athir reports that the malik was a camel driver who rose through the army ranks (*al-Kāmil fī'l-Ta'rikh*, 13 vols., ed. C. J. Tornberg [repr. Beirut, 1965-67], s.v. anno 611, 12:303); Nasawī says he was the son of the wet nurse of Nusrat al-Din Muhammad ibn Lizz, ruler of Zuzan, and had been appointed ambassador to the Khwarazmshah's court. There he intrigued against his master until the latter was forced to flee; the Khwarazmshah then appointed the erstwhile ambassador vizier of Zuzan (Muḥammad ibn Aḥamd al-Nasawī, *Sirāt Jalāl al-Dīn Mankubirtī*, ed. H. A. Ḥamdī (Cairo, 1953), pp. 74-75; ed. and trans. O. Houdas, *Histoire du Sultan Djelāl ed-Dīn Mankubirtī*, 2 vols. (Paris, 1891-95), 2:47-98).
8. *Encyclopaedia of Islam*, 2d ed. (hereafter *EI²*), s.v. "Kirmān," by A. K. S. Lambton.

9. Nasawi, *Sirat Jalal al-Din*, Hamdi ed., p. 75, trans. p. 48.
10. 'Ata' Malik Juvayni, *Tārīkh-i Jahān Gushā, The History of the World Conqueror*, trans. J. A. Boyle, 2 vols. (Cambridge, Mass., 1958), 2:365.
11. This episode may have inspired the poet Sa'di's reference to the malik of Zuzan in the *Gulistan*. Story 24 of the first section recounts the tale of the noble minister who once angered his master, the malik of Zuzan, and was consequently thrown into prison. Despite the unjust imprisonment, the vizier refused to yield to a rival king's secret plea for sedition and instead sent back a short, noncommittal reply. Upon intercepting the message—that whoever usually shows kindness can be pardoned if he once appears cruel—the malik of Zuzan naturally forgave his minister. The story ends with a poem to the effect that God, not man, is responsible for causing benefit or pain.
12. Minhāj al-Dīn Abū 'Umar al-Uthman Juzjāni, *Ṭabaqāt-i Nāṣiri*, trans. H. G. Raverty (repr. Delhi, 1970), p. 283.
13. Nasawi, *Sirat Jalal al-Din*, Hamdi ed., p. 74; trans. p. 47.
14. Juvayni, *World Conqueror*, 2:369. Many manuscripts lack the year, but Boyle (n. 25), following Barthold, places these events in 615.
15. If we accept Godard's reading of the cursive inscription as 616 (see n. 6), then the building must have been completed after the malik's death. Alternatively, the unit's digit of the cursive inscription might not have read six (see n. 6).
16. *EP*, s.v. "Abū Ḥanīfa al-Nu'mān" by J. Schacht.
17. Two of the madrasas are in Aleppo (the 1169 Muqaddamiyya and the 1193 Shadhbakhtiyya) and two are in Damascus (the 1172 madrasa of Nur al-Din and the 1180 Rayhaniyya). The endowment inscriptions are published in *Répertoire chronologique d'épigraphie arabe* (hereafter *RCEA*), vol. 9 (Cairo, 1937), nos. 3284, 3467, 3293, and 3342 respectively. In addition, for the Aleppo examples, see Ernst Herzfeld, *Matériaux pour un Corpus Inscriptionum Arabicarum* (hereafter *MCLA*): *Alep* (Cairo, 1954), no. 11, p. 233, and no. 122, p. 256. For the madrasa of Nur al-Din, see also Ernst Herzfeld, "Studies on Damascus I," *Ars Islamica* 8 (1942):40-49. The epithet is not used, however, in the endowment inscription of the earliest extant Hanafite madrasa, that of Abu Mansur Kumushtaki at Busra (*RCEA* 3077).
18. *EP*, s.v. "Ḥanāfiyya" by W. Heffening and J. Schacht.
19. See also Ormeljan Pritsak, "Āl-i Burhān," *Der Islam* 30 (1952): 81-96.
20. Herzfeld, *MCLA: Alep*, no. 168, p. 316.
21. Yāqūt ibn 'Abdallāh, *Muḥjam al-Buldān*, ed. Ferdinand Wüstenfeld, 7 vols. (Leipzig, 1866), 2:958.
22. Juzjani, *Ṭabaqat*, trans. Raverty, 1:283.
23. Ḥamdullāh Mustawfī al-Qazvinī, *Nuḥḍat al-Qulūb*, ed. Guy Le Strange (Leiden, 1915), p. 154, and trans., idem (Leiden, 1919), p. 152. This concordance of text and building shows that seemingly prosaic statements, such as Qazvini's remark about the inhabitants' denomination, were reported for a specific reason and hence that medieval chronicles may be more pertinent to art historical research than hitherto recognized.
24. Godard, "Khorasan," p. 117.
25. K. A. C. Creswell, *Early Muslim Architecture*, 2d ed. (Oxford, 1969), 1:45, 48-58, 137-38, 651.
26. *EP*, s.v. "Qibla. ii. Astronomical Aspects."
27. These arguments were set forth by King in several recent lectures and in his unpublished monograph on orientations.
28. Godard, "Khorasan," p. 121.
29. André Godard, "L'Origine de la madrasa, de la mosquée et du caravansérail à quatre iwans," *Ars Islamica* 15-16 (1951): 4 and figs. 3, 6, and 7.
30. Ernst Diez, *Churasanische Baudenkmäler* (Berlin, 1918), pp. 71-72, fig. 29, and pls. 18, 19, and 30; Ernst Herzfeld, "Eine Bauinschrift von Niẓām al-Mulk," *Der Islam* 12 (1921): 98-101, and idem, "Studies on Damascus 2," *Ars Islamica* 10 (1943): 16-19 and figs. 32-37.
31. Casimir and Glatzer, "Šāl-i Mašhad," pp. 53-68.
32. In a personal note, the authors amended the date published in their article from A.H. 461 to A.H. 471. Janine Sourdell-Thomine also published corrections to the inscription in *Annuaire de l'École Pratique des Hautes Etudes, IV^e section* (Paris, 1975-76), but this work was not available to me.
33. This is the form given in 'Abd al-Hayy Husaynī Ḥabībī's edition of the *Ṭabaqāt-i Nāṣiri*, 2 vols. (Kabul, 1342-43/1963-64), p. 421. Raverty's translation gives *malika* Tāj al-Dunyā wa'l-Dīn Gohar Malik (p. 376).
34. Juzjani, *Ṭabaqat*, trans. 1:384; Maricq and Wiet, *Djam*, pp. 48-51; *EP*, s.v. "Karrāmiyya" by E. C. Bosworth.
35. *EP*, s.v. "Fakhr al-Dīn Rāzī," by C. G. Anawati and "Harat" by N. R. Frye. The orientation of the Gargistan madrasa does not help in ascertaining its rite, for no mihrab was found. According to Bazdawī, Shāfi'ites used a qibla of due south, and the Gargistan madrasa is in fact cardinally aligned with the major entrance portal on the south. The discoverers suggested that the building faced west, thus assuming that the now-vanished western section would have contained a prayer hall with a mihrab. It is also possible that one of the domed rooms along the south entrance wall could have served as the prayer hall.
36. Daniel Schlumberger and Janine Sourdell-Thomine, *Lashkari Bazar* (Mémoires de la Délégation Archéologique Française en Afghanistan 18) (Paris, 1978), pp. 11-15.
37. *Ibid.*, pp. 63-68.
38. Photograph by Josephine Powell published in A. S. Melikian-Chirvani, "À Propos of the Ghūrīd Parts of the Great Mosque at Herat," *Bulletin of the School of Oriental and African Studies* 33 (1970) pl. 9; Saljuqi has also published part of the inscription in *Mazarat-e Hirat*, ed. Fikri Saljuqi (Kabul, 1967), p. 157, but the lack of binoculars hindered his reading, and it does not entirely make sense.
39. Persian inscriptions are quite common in this area and time. The most famous is the panegyric poem inscribed around the court of the palace of Maṣ'ūd III at Ghazna (Alessio Bombaci, *The Kūfic Inscription in Persian Verses in the Court of the Royal Palace of Maṣ'ūd III at Ghazni* (Rome, 1966). Rabat-i Malik (1078) has an as yet unread Persian foundation inscription (illustrated in A. U. Pope and Phyllis Ackerman, eds., *Survey of Persian Art* [Oxford, 1939] pl. 272); the 1152 Uzkend mausoleum's inscription (*RCEA* 3416) has been read by A. Y. Yakubovskiy, "Dve nadpisi na severnom Mavzolei 1152 g.v. Uzgend," *Epigrafiika Vostoka* 1 (1947): 27-32. Contemporary Salghurid inscriptions in Fars are also in Persian; see A. S. Melikian-Chirvani, "Le Royaume de Salomon," *Le Monde Iranien et l'Islam* 1 (1971): 1-41. Inscriptions such as these help document medieval Persian and may attest to spoken variants. The Chisht inscription, for example, uses the form *jumid* for the Arabic month Jumada.
40. *RCEA* 3370.
41. Maricq and Wiet, *Djam*, pp. 25-29.

42. Ibid., and Judi Moline, "The Minaret of Gam (Afghanistan)," *Kunst des Orients* 9 (1973-74): 131-48.
43. Ralph Pinder-Wilson, "Ghaznavid and Ghurid Architecture and Epigraphy," a paper given at the symposium on the art of the Seljuks in Iran and Anatolia (Edinburgh, 29 August-2 September 1982). However, Sourdél-Thomine (Schlumberger and Sourdél-Thomine, *Lashkari Bazar*, p. 49, n. 3) gives A.H. 570. As the titles, decorative style, and use of glazed tile seem to me to accord better with Ghiyath al-Din Muhammad's later monuments, I have for the moment accepted Pinder-Wilson's reading. It is often difficult to distinguish between *tisā'* and *sabā'* (or here, *tis'in* and *sab'in*) but one hopes that publication of a full range of photographs of the inscription will resolve the problem.
44. Most readily available in *EP*, s.v. "Dilhī. 2. Monuments" and "Dilhī Sultanate, Art" by J. Burton-Page.
45. As Wiet noted (Maricq and Wiet, *Djam*, pp. 53-54), the bracketed sections of the two inscriptions in *RCEA* have been incorrectly completed. The second band around the base (*RCEA* 3618) refers to Mu'izz al-Din Muhammad and should not include the introductory bracketed passage; the fourth band (*RCEA* 3619) records the name and titles of his brother Ghiyath al-Din Muhammad and should read Abu'[l-Fath], not Abu'[l-Muẓaffar].
46. *RCEA* 3496.
47. Melikian-Chirvani, "Great Mosque of Herat."
48. Ibid., p. 324. The most recent study of the building is Lisa Golombek, "The Resilience of the Friday Mosque: The Case of Herat," *Muqarnas* 1 (1983): 95-102.
49. Since I am concerned here mainly with royal patronage, I am setting aside a series of often-undated provincial monuments such as the mausolea at Sar-i Pul (A. D. H. Bivar, "Seljūqid Ziyārāt of Sar-i Pul [Afghanistan]," *Bulletin of the School of Oriental and African Studies* 29 [1966]: 57-63) Imam Sahib (Janine Sourdél-Thomine, "Le Mausolée de Baba Hatim en Afghanistan," *Revue des Études Islamiques* 39 [1971]: 293-320, and A. D. H. Bivar, "The Inscription of Sālār Khalīl in Afghanistan," *Journal of the Royal Asiatic Society* [1977]: 145-49) or Safid-Buland (Ernst Cohn-Wiener, "A Turanic Monument of the Twelfth Century A.D.," *Ars Islamica* 6 [1939]: 88-91), which can be attributed to the second half of the twelfth century on the basis of their style. The determination of provincial style, affected as it is by both chronological lag and geographical distance, is too complex a problem to be developed in this article.
50. Sourdél-Thomine, in Schlumberger and Sourdél-Thomine, *Lashkari Bazar*, pp. 42-43, and Casimir and Glatzer, "Šah-i Mašhad," nos. 6-7.
51. Sourdél-Thomine, in Schlumberger and Sourdél-Thomine, *Lashkari Bazar*, p. 65.
52. Oleg Grabar first suggested this in his review of Maricq and Wiet, *Djam* (*Ars Orientalis* 4 [1961]: 419), but the exact meaning of the choice is still unclear.
53. Basic study by Wiet, in Maricq and Wiet, *Djam*, pp. 51-54.
54. Preliminary remarks by Jean Sauvaget, "Glanes épigraphiques," *Revue des Études Islamiques* 6 (1941-46): 27-29. The knotted Kufic inscription is partially visible on a photograph reproduced in Oskar von Niedermayer, *Afghanistan* (Leipzig, 1924), p. 156.
55. The basic study of Zangid titulature is Nikita Elisséeff, "La Titulature de Nūr ad-Dīn d'après ses inscriptions," *Bulletin des Études Orientales* 14 (1952-54): 155-96.
56. *EP*, s.v. "Khawādja Mu'in al-Dīn Ḥasan Īshīrī" and "Īshīrīyya" by K. A. Nizani. See also J. S. Trimingham, *Sufi Orders in Islam* (Oxford, 1971), pp. 55-56.
57. Juzjani, Raverty trans., pp. 419-20; Maricq and Wiet, *Djam*, p. 42, n. 6.
58. Janine Sourdél-Thomine, "À propos du cenotaphe de Maḥmūd à Ghazna (Afghanistan)," *Essays in Islamic Art and Architecture in Honor of Katharina Otto-Dorn*, ed. Abbas Daneshvari (Malibu, Calif., 1981): 127-35.
59. *EP*, s.v. "Ghaznawids. Art and Monuments" by J. Sourdél-Thomine.
60. Bombaci; Sourdél-Thomine, in Schlumberger and Sourdél-Thomine, *Lashkari Bazar*, p. 36.
61. Eugenio Galdieri, *Isfahān: Masjid-i Gum'a 2: Il periodo al-i Būyide* (Rome, 1973), p. 38.
62. Janine Sourdél-Thomine, "L'Art gūride d'Afghanistan à propos d'un livre récent," *Arabica* 7 (1960): 273-80.
63. See Sourdél-Thomine's clear summary of the change from late Ghaznavid to Ghurid architectural decoration in her conclusions to the architectural decoration at Lashkar Gah (Schlumberger and Sourdél-Thomine, *Lashkari Bazar*, pp. 69-71).
64. Schlumberger and Sourdél-Thomine, *Lashkari Bazar*, pl. 45; Casimir and Glatzer, "Šah-i Mašhad," 14-22; Maricq and Wiet, *Djam*, pl. 2; Melikian-Chirvani, "Great Mosque of Herat," pls. 12-14.
65. The basic study of Ghaznavid epigraphy is Samuel Flury, "Le Décor épigraphique des monuments de Ghazna," *Syria* 6 (1925): 61-90. His magnificent drawings are still worthy of study, although his conclusions have been modified by Janine Sourdél-Thomine's redating of the minaret of Bahramshah ("Deux minarets d'époque seljoukide en Afghanistan," *Syria* 30 (1953): 105-36). The Firuzabad minaret is illustrated in Harrow and Hutt, *Iran* 1, pp. 103-04; its inscription is *RCEA* 3209.
66. Casimir and Glatzer, "Šah-i Mašhad," inscription no. 2, figs. 8-11; Maricq and Wiet, *Djam*, pl. 9; Melikian-Chirvani, "Great Mosque of Herat," pls. 7-8.
67. In his paper, "Seljuk Minarets: Some New Data," delivered at the Edinburgh symposium on the art of the Seljuks, Bernard O'Kaue called attention to this minaret, visited by Ernst Herzfeld (photograph 2873 in the Herzfeld Archives at the Freer Gallery of Art, Smithsonian Institution, Washington, D.C.). The lower band in simple Kufic (*RCEA* 3259) bears the name of Taj al-Din Nasr, grandfather of Taj al-Din Harb mentioned in the upper band (*RCEA* 3785).
68. Juzjani, *Tabaqat*, Raverty trans., p. 192.
69. Schlumberger and Sourdél-Thomine, *Lashkari Bazar*, pl. 127a-b, and pp. 64-66.
70. Maricq and Wiet, *Djam*, inscription no. 6, pl. 7, 3.
71. Ibid., inscription no. 4, pl. 7, 1.
72. *RCEA* 3864; G. A. Pugachenkova and L. I. Rempel, *Puti Razvitiya Arkhitektury Yuzhnogo Turkmenistana* (Moscow, 1958), pp. 260-66 and M. A. Pribitkova, *Stroitel' naya Kul'tura Srednei Azii v. IX-XII vv.* (Moscow, 1973), pp. 205-06. There is another portal with a similar inscription in the village of Abivverd (Pugachenkova and Rempel, *Puti Razvitiya*, pp. 259-60) which they attribute to the first half of the twelfth century, but on the basis of its similarities to the nearby portal at Dahistan, I would date later.
73. Casimir and Glatzer, "Šah-i Mašhad," inscription no. 3, fig. 13.

74. Melikian-Chirvani, "Mosque at Herat," p. 9; Casimir and Glatzer, "Šah-i Mašhad," 14-15, figs. 33-34; Niedermeyer, *Afghanistan*, fig. 154. Triple punched stems are also found in the mausolea at Sar-i Pul (Bivar, "Seljuqid Ziyarats," pls. 1-9) and at Vekil Bazar (G. A. Pugachenkova, *Iskusstvo Turkmenistana* [Moscow, 1967], pl. 80).
75. RCEA 3583, illustrated in J. Hackin, J. Carl, and J. Meunie, *Diverses recherches archéologiques en Afghanistan* (Mémoires de la Délégation Archéologique en Afghanistan 8) (Paris, 1959), figs. 114-15.
76. For example, the mosque at Farumad (Godard, "Khorasan," fig. 68) and the mihrab at Bastam (Wilber, *Ilkhanid Period*, fig. 37).
77. Juvayni, *World Conqueror*, 1:334.
78. Richard Ettinghausen, "The Bobrinsky 'Kettle'," *Gazette des Beaux Arts*, 6th ser, 24 (1943): 193-208.
79. Ernst Herzfeld, "A Bronze Pen Case," *Ars Islamica* 3 (1936): 35-43.
80. Melikian-Chirvani discusses Khurasani metalwork in a series of articles in *Studia Iranica* 3-6 (1974-77) and in chapter 3, "The Later Khorasan School," of his recent catalogue of the metalwork from the Victoria and Albert Museum, *Islamic Metalwork from the Iranian World, 8th-18th Centuries* (London, 1982), pp. 55-135.
81. Adolf Grohman gives some examples of animated script in "Anthropomorphic and Zoomorphic Letters in the History of Arabic Writing," *Bulletin de l'Institut d'Égypte* 38 (1955-56): 117-21.
82. RCEA 3530; Michael Meister, "The 'Two-and-a-half Day' Mosque," *Oriental Art*, n.s. 18 (1972): 57-63 (see below, n. 91, for another builder possibly from Herat).
83. Nasawi tells us that the malik of Zuzan doubled the prosperity of the Kirman province and increased animal breeding so that when the Khwarazmshah returned from Iraq having lost most of his camels, the malik of Zuzan sent him 4,000 replacements in Nishapur. After the malik's death, seventy loads of gold pieces and diverse objects were carted off to the royal treasury. These riches arrived just as the Khwarazmshah was fleeing the Mongols on the banks of the Jayhun River, however, so without even breaking the seals they were all thrown into the river along with an even larger quantity of treasure that the sovereign had carried with him (Nasawi, *Sirat Jalal al-Din*, Houdas trans. p. 49; Hamdi ed., p. 75).
According to Juvayni, however, when Rukn al-Din, governor of Iraq, heard of his father's flight, he set out to meet him. En route he passed through Kirman, where he opened the treasury of the malik of Zuzan and distributed its contents to his troops (Juvayni, *World Conqueror*, 2:475).
84. Donald Wilber, "The Development of Mosaic Faience in Islamic Architecture in Iran," *Ars Islamica* 6 (1939): 16-47.
85. B. P. Denike, *Arkhitekturni Ornament Srednei Azii* (Moscow, 1939), p. 133; all are illustrated in Derek Hill and Oleg Grabar, *Islamic Architecture and Its Decoration A.D. 800-1500* (Chicago, 1964).
86. See above, n. 72.
87. Van Berchem, in Diez, *Churasanische Baudenkmaler*, pp. 107-09.
88. Ernst Herzfeld, "Die Gumbadh-i 'Alawiyyan und die Baukunst der Ilkhane in Iran," *A Volume of Oriental Studies Presented to E. G. Browne*, ed. T. W. Arnold and R. A. Nicholson (Cambridge, 1922), pp. 192-93.
89. Wilber, "Mosaic faience," p. 41; color illustration in Hutt and Harrow, *Iran I*, pl. 14.
90. I can make out the following text: *warthat-i amir 'Abdallah* [10-12 letters] *mulk-i ishān būd* (?) [7 letters] *majmū'-i āl wa zamīn-i Rādkān ... ghafara Allāh lahum fī sana [ithnayn] wa sitta mi'a waqf kardard* (the heirs of Amir 'Abdallāh ... from their possession ... all the people [?] and land of Radkan ... endowed this, may God forgive them, in the year [two] and six hundred). A small cursive inscription at the top of two of the engaged colonnettes gives the signature of the builder, *'amal-i Abu Bakr ibn* (one word) / *al-bannā' al-Haravī* (the work of Abu Bakr ibn [one word]/the builder of Herat [?]). The final words in both parts of the inscription are unclear.
91. James Allan, "Abū'l-Qāsim's Treatise on Ceramics," *Iran* 11 (1973), para. 8, mentions that cobalt (called *lājavard*) was mined in the village of Qamsar near Kashan; see also Hans E. Wulff, *Traditional Crafts of Persia* (Cambridge, Mass., 1966) p. 14.
92. Ibid., pp. 120 and 127; for the analysis of the glaze, see Wilber, "Mosaic Faience," p. 29 and n. 50.
93. Wulff, *Traditional Crafts*, p. 147.
94. Umberto Scerrato, "Islamic Glazed Tiles with Moulded Decoration from Ghazna," *East and West*, n.s. 13 (1962): 263-87.
95. P. M. Sykes, *Ten Thousand Miles in Persia* (London, 1902), pp. 426-27; RCEA 3828ter.
96. Antony Hutt, "Three Minarets in the Kirman Region," *Journal of the Royal Asiatic Society* (1970): 172-78; color illustration in Hutt and Harrow, *Iran I*, pl. 13.